

What is claimed is:

1. A roll forming machine of the type which forms an indeterminate length panel of a desired lateral profile from a uniform width supply strip of sheet metal having a pair of parallel straight edges, said roll forming machine driving said supply strip along a predetermined path of travel through a plurality of roll forming stations and comprising:

10 a rigid framework including a pair of rigid parallel side frames interconnected one to the other by a plurality of rigid parallel upper and lower transverse members to form a rigid cage having an interior and a width between said side frames;

15 a plurality of mounting blocks each supported on a respective one of said lower transverse members adjacent a first one of said pair of side frames, each of said mounting blocks having an upper horizontal surface and a plurality of spaced mounting holes extending into said each mounting block from said upper surface, said plurality of mounting holes for each of said mounting blocks extending along a respective line orthogonal to  
20 said pair of side frames and having identical spacing on all of said plurality of mounting blocks, and wherein the upper horizontal surfaces of all of said plurality of mounting blocks lie along a single horizontal plane;

25 a first mounting rail secured to at least two of said plurality of mounting blocks by at least two mounting threaded members each extending through a respective opening in said first mounting rail and into a respective mounting hole in a respective one of said at least two mounting blocks, wherein each of said respective mounting holes occupies the same  
30 relative position in its respective mounting block;

a first tooling rail secured to said first mounting rail;  
and

at least one set of roll forming elements each defining a  
roll forming station secured to said first tooling rail;

5        wherein said first tooling rail with said at least one set  
of roll forming elements secured thereto is dimensioned so that  
it can be manipulated into and out of said cage vertically  
between an adjacent pair of upper transverse members.

10        2. The roll forming machine according to Claim 1 wherein:

said first mounting rail is formed with a plurality of  
equally spaced mounting holes along a line adapted to be  
parallel to said side frames when said first mounting rail is  
secured to said mounting blocks;

15        said first tooling rail is formed with a plurality of  
openings along a line, wherein said plurality of openings are  
registrable in pairs with respective pairs of the mounting holes  
of said first mounting rail; and

said roll forming machine further includes a plurality of  
20 threaded members each extendable through a respective first  
tooling rail opening and into a respective first mounting rail  
mounting hole for securing said first tooling rail to said first  
mounting rail.

25        3. The roll forming machine according to Claim 1 wherein  
each of said mounting blocks is adjustably positionable relative  
to said respective lower transverse member along a line  
orthogonal to said pair of side frames.

4. The roll forming machine according to Claim 1 further comprising:

a first plurality of threaded shafts extending into said cage from a second one of said pair of side frames and  
5 orthogonal to said pair of side frames;

a first plurality of traveler bar blocks each threadedly secured to a respective one of said first plurality of threaded shafts for movement therealong;

a second mounting rail secured to at least two of said  
10 first plurality of traveler bar blocks;

a second tooling rail secured to said second mounting rail;  
and

at least one set of roll forming elements each defining a roll forming station secured to said second tooling rail;

15 wherein said second tooling rail with said at least one set of roll forming elements secured thereto is dimensioned so that it can be manipulated into and out of said cage vertically between an adjacent pair of upper transverse members.

20 5. The roll forming machine according to Claim 4 further comprising adjustment means outside said cage and coupled to said first plurality of threaded shafts for controllably rotating said first plurality of threaded shafts to selectively move said first plurality of traveler bar blocks toward and away  
25 from said second one of said pair of side frames.

6. The roll forming machine according to Claim 5 further comprising:

a second plurality of threaded shafts extending into said  
30 cage from said second one of said pair of side frames and orthogonal to said pair of side frames;

a second plurality of traveler bar blocks each threadedly secured to a respective one of said second plurality of threaded shafts for movement therealong;

5 a third mounting rail secured to at least two of said second plurality of traveler bar blocks;

a third tooling rail secured to said third mounting rail;  
and

at least one set of roll forming elements each defining a roll forming station secured to said third tooling rail;

10 wherein said third tooling rail with said at least one set of roll forming elements secured thereto is dimensioned so that it can be manipulated into and out of said cage vertically between an adjacent pair of upper transverse members; and

wherein said adjustment means is also coupled to said  
15 second plurality of threaded shafts and includes a clutch coupled between said first and second pluralities of threaded shafts, said clutch being selectively engagable and disengagable to couple and uncouple, respectively, said first and second pluralities of traveler bar blocks for concurrent movement.

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7. A roll forming machine of the type which forms an indeterminate length panel of a desired lateral profile from a uniform width supply strip of sheet metal having a pair of parallel straight edges, said roll forming machine driving said  
25 supply strip along a predetermined path of travel through a plurality of roll forming stations and comprising:

a rigid framework including a pair of rigid parallel side frames interconnected one to the other by a plurality of rigid parallel upper and lower transverse members to form a rigid cage  
30 having an interior and a width between said side frames;

a first plurality of threaded shafts extending into said cage from a first one of said pair of side frames and orthogonal to said pair of side frames;

5 a first plurality of traveler bar blocks each threadedly secured to a respective one of said first plurality of threaded shafts for movement therealong;

a first mounting rail secured to at least two of said first plurality of traveler bar blocks;

10 a first tooling rail secured to said first mounting rail; and

at least one set of roll forming elements each defining a roll forming station secured to said first tooling rail;

15 wherein said first tooling rail with said at least one set of roll forming elements secured thereto is dimensioned so that it can be manipulated into and out of said cage vertically between an adjacent pair of upper transverse members.

8. The roll forming machine according to Claim 7 further comprising adjustment means outside said cage and coupled to  
20 said first plurality of threaded shafts for controllably rotating said first plurality of threaded shafts to selectively move said first plurality of traveler bar blocks toward and away from said first one of said pair of side frames.

25 9. The roll forming machine according to Claim 8 further comprising:

a second plurality of threaded shafts extending into said cage from said first one of said pair of side frames and orthogonal to said pair of side frames;

a second plurality of traveler bar blocks each threadedly secured to a respective one of said second plurality of threaded shafts for movement therealong;

5 a second mounting rail secured to at least two of said second plurality of traveler bar blocks;

a second tooling rail secured to said second mounting rail; and

at least one set of roll forming elements each defining a roll forming station secured to said second tooling rail;

10 wherein said second tooling rail with said at least one set of roll forming elements secured thereto is dimensioned so that it can be manipulated into and out of said cage vertically between an adjacent pair of upper transverse members; and

wherein said adjustment means is also coupled to said 15 second plurality of threaded shafts and includes a clutch coupled between said first and second pluralities of threaded shafts, said clutch being selectively engagable and disengagable to couple and uncouple, respectively, said first and second pluralities of traveler bar blocks for concurrent movement.

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10. The roll forming machine according to Claim 7 further comprising:

a plurality of mounting blocks each supported on a respective one of said lower transverse members adjacent a 25 second one of said pair of side frames, each of said mounting blocks having an upper horizontal surface and a plurality of spaced mounting holes extending into said each mounting block from said upper surface, said plurality of mounting holes for each of said mounting blocks extending along a respective line 30 orthogonal to said pair of side frames and having identical spacing on all of said plurality of mounting blocks, and wherein

the upper horizontal surfaces of all of said plurality of mounting blocks lie along a single horizontal plane;

5 a third mounting rail secured to at least two of said plurality of mounting blocks by at least two mounting threaded members each extending through a respective opening in said third mounting rail and into a respective mounting hole in a respective one of said at least two mounting blocks, wherein each of said respective mounting holes occupies the same relative position in its respective mounting block;

10 a third tooling rail secured to said third mounting rail; and

at least one set of roll forming elements each defining a roll forming station secured to said third tooling rail;

15 wherein said third tooling rail with said at least one set of roll forming elements secured thereto is dimensioned so that it can be manipulated into and out of said cage vertically between an adjacent pair of upper transverse members.

11. The roll forming machine according to Claim 10  
20 wherein:

said third mounting rail is formed with a plurality of equally spaced mounting holes along a line adapted to be parallel to said side frames when said third mounting rail is secured to said mounting blocks; and

25 said third tooling rail is formed with a plurality of openings along a line, wherein said plurality of openings are registrable in pairs with respective pairs of the mounting holes of said third mounting rail;

30 said roll forming machine further including a plurality of bolts each extendable through a respective third tooling rail opening and into a respective third mounting rail mounting hole

for securing said third tooling rail to said third mounting rail.

12. The roll forming machine according to Claim 10 wherein  
5 each of said mounting blocks is adjustably positionable relative to said respective lower transverse member along a line orthogonal to said pair of side frames.